

BREAKOUT SESSIONS FOR 2002 UDOT ENGINEERING CONFERENCE

1. **Title:** UDOT's Role as Featured State for the 2002 International Bridge Conference

Presenters: Dave Nazare, Jon Bischoff, and Ray Cook

Synopsis - UDOT was honored to be the featured state at the International Bridge Conference June 10, 11, and 12, 2002. The prestigious conference which was attended by over 1300 bridge engineers, contractors and suppliers is hosted every year by the Western Pennsylvania Society of Professional Engineers and held in Pittsburgh, PA. The first part of this session will describe what the IBC is about and discuss UDOT's responsibilities as the featured state. We will then present the following 3 of 8 technical presentations that were given at the conference.

- C Emergency replacement of I-80 Bridge into Salt Lake International Airport - Dave Nazare
- C Cherry Hill Bridge Liquefaction and Lateral Spread Evaluation and Mitigation - Jon Bischoff
- C Challenges of the I-15 Reconstruction Project - Ray Cook

2. **Title:** New Roles and New Tools in UDOT's Hydraulics Section

Presenters: Mike Fazio, Denis Stuhff and others

Synopsis - Overview of the changing role of the Central Hydraulics Section and its relationship with the Regions. A Progress Report and discussion of the status of ongoing UDOT sponsored Hydrologic Studies. Also, a discussion of new methods and technologies in everyday operations. Including a demonstration of the WMS software.

3. **Title:** New Streamlined RFQ Process

Presenter: Marie Walton, Consultant Services Manager

Synopsis - We are going to discuss a new way to contract through Consultant Services. When the General Engineering and Local Government Pool is not right for your project (because of dollars) and you don't have to do a standard RFQ. There is an alternative method which will get you the best qualified consultant and contract in approximately 4 weeks.

4. **Title:** Research Projects

Presenters: Stan Burns and Dan Avila

Synopsis - Discussion of the existing research program. Summary will be given of the overall program; number, type, distribution and dollar amount. Research staff will discuss how a typical research project is developed, funded, and implemented. Review of the UTRAC process. Also included in this discussion will be a review of 3 “typical” ongoing projects. Audience will be asked to develop potential future research projects. We will then have presentation on the following subjects:

1. New/Experimental Products Program - Ken Berg and Barry Sharp
2. Technology Transfer - Dave Watts
3. Past Research Projects - Doug Anderson
4. I-15 National Testbed - Blaine Leonard and Clifton Farnsworth

5. **Title:** A Plan for all Seasons - UDOT Preventive Maintenance

Presenter: Lynn J. Bernhard

Synopsis - Whatever the season, whatever the need, UDOT Maintenance meets the challenge with statewide and site-specific maintenance plans. Whether its litter control, landscaping, or lane leveling, planning helps UDOT focus resources on customer needs. Effective maintenance planning requires continual interaction with other UDOT divisions and groups to ensure efficiency and economy. We will discuss the planning and execution process for meeting the seasons of need on Utah highways. The various maintenance plans will be discussed.

6. **Title:** Division of Occupational and Professional Licensing

Presenter: Lynn J. Bernhard, II

Synopsis - Speaking about Division of Occupational and Professional Licensing purpose, organization, and function of DOPL and the Licensing Board. Also, the obligations and responsibilities of DOPL and the licensee. Also, speak about the complaint process, the investigative process and then a Question/Answer period.

7. **Title:** Laws Relating to “Takings” and UDOT Authority to Regulate Property Use and Access/Overview of the Administrative Rules Process

Presenter: Jim Beadles

Synopsis - In the first part of this session, the laws of inverse condemnation or “takings” will be introduced, explained, and applied through examples relevant to UDOT work. In the last part of the session, the administrative rules process will be reviewed and ways will be discussed to adopt policies into rules when needed.

8. **Title:** Interviewing Techniques

Presenters: Amanda Covington, Tom Hudachko, and Nile Easton

Synopsis - This session will focus on media training for UDOT employees and consultants. We will demonstrate how to stick to the message, deliver an impactful soundbite, handle difficult questions, and get the story YOU want. We will break into group and practice as well as do some real interview scenarios. It should be fun! The Department is implementing a media training program and this will cover many of the items employees will be required to learn.

9. **Title:** Public Involvement Successes - Building Ownership in Projects:

Presenter: Andy Neff, Myron Lee, Evelyn Tuddenham, Geoffrey Dupaix,
Sandy Weinrauch from UDOT
Aaron Wall from JUB Engineering

Synopsis - This session will illustrate what public involvement techniques and processes have been used successfully to develop public ownership in UDOT and local government projects. JUB Engineers and the UDOT Public Involvement Team will use several case studies as examples.

10. **Title:** On-line Utility Permitting and Utility GIS Database Management for Public Right-of-Way

Presenters: Philip Meis, Utility Mapping Services, Inc.
Dr. Cesar Quiroga, Texas Transportation Institute

Synopsis - On-line permit processing and utility GIS database management will be a boon for all agencies involved with public ROW. Public ROW agencies, typically understaffed, would have a powerful tool to readily gage existing conditions, evaluate utility permits, coordinate decisions with planners, designers, and construction and maintenance personnel, and track changes. Permit applications would become standardized, greatly reducing the effort required to complete, handle, process, and approve applications.

A system is being developed by the Texas Transportation Institute for ROW management. It will provide users with visual access to detailed utility information. The on-line permit processing system allows utility firms to submit electronic permit applications. Following construction, utilities are requested to submit an as-built survey electronically to update the database. The use of this type of system will dramatically improve handling of utility inventory data for ROW management.

11. **Title:** Subsurface Utility Engineering

Presenters: Philip Meis, Utility Mapping Services, Inc.
Dr. Cesar Quiroga, Texas Transportation Institute

Synopsis - Have you used subsurface utility engineering on your projects? Subsurface utility engineering is being used more frequently on UDOT projects to provide utility information at the beginning of the project, rather than waiting for the information to be gathered during the design process. Learn more about subsurface utility engineering, when to use it and the information obtained from this activity. Several lessons learned will be provided on projects completed in Utah using subsurface utility engineering.

12. **Title:** Twenty Years of Silica-Fume Concrete in the USA–What Have We Learned?

Presenters: Terence C. Holland, P.E., President of American Concrete Institute and Executive Director of Silica Fume Association.

Synopsis - Silica fume has been commercially available in the U.S. for about 25 years. During that time it has gone from a research material to a widely specified concrete component. This session presents a brief history of the development of the use of silica fume in the U.S. market. The lessons learned in areas such as appropriate applications, mixture proportioning, finishing, curing, and constructability are discussed. A major state-of-the-art presentation on using silica fume is described.

13. **Title:** Jobsite Added Concrete Admixtures

Presenters: Ronald H. Hall, Vice President of Concrete Solutions, Inc.

Synopsis - Chemicals are added to almost all concrete and this talk will focus on the best way to add admixtures on the jobsite to preserve the integrity of the concrete, make it more useful and stay within the specifications. Current concrete specifications and the various types of admixture and effects will be discussed.

14. **Title:** The ABC's of FRC

Presenters: Bob Zellers, P.E., Director of Technology and Engineering, Nycon Inc.

Synopsis - Learn everything you need to know about Fiber Reinforced Concrete that will help you compete in the 21st Century and beyond. Completion of this course provides one Continuing Education Unit. American Concrete Institute (ACI) Committee 544 documents will be the foundation of this program.

15. **Title:** The North Coast Highway Improvement Project in Jamaica

Presenters: Bob Jacobs, Stanley Consultants

Synopsis - Have you ever been to the north coast of Jamaica? If you have, you probably remember the thrilling bus ride to your hotel or sightseeing venue, three-abreast passes on a two-lane narrow road or no sight distance, rather than the beautiful beaches. Stanley Consultants has been working with the Ministry of Transport and Works, Government of Jamaica, and the Planning Institute of Jamaica to develop the concept, final design and implementation of a project will take the fear out of traveling on local roads in Jamaica.

While Jamaica does not have a formal program for context sensitive solutions, context sensitive solutions became a significant part of the design of the three segments included in this project. Some of the unique features of the project included environmental mitigation for significant historical sites, protection of the reef and protection of tourism. Significant project challenges included difficult terrain, poor soil conditions, the lack of acceptable detour routes, and a difference in culture between the contractors and local labor and suppliers. Unique engineering solutions were developed to reduce project costs that can be applied to construction anywhere.

16. **Title:** I'm A 6 Fixer; Tackling Utah's Most Notorious Highway

Presenter: Lee Arnold, Bob Jacobs and Mike Miles

Synopsis - This session reviews the issues found during the development of the US-6 Safety Study for US-6 from Spanish Fork to Green River. Some of this presentation will deal with lessons learned from the analysis of the roadway design, traffic operations and accident data.

17. **Title:** Are You Customer Service Friendly?

Presenter: Rachel A. B. McQuillen, P.E. - URS Corporation

Synopsis - Who are your customers? Do you measure up when it comes to excellent customer service? Do you and your organization provide a consistent message when dealing with customers? How can I improve customer service in my organization? This presentation will take a lively look at the elements of customer service and how to make improvements in any organization. This is a great session for employees and managers of both government and private industry.

18. **Title:** STIP Development/Funding Overview

Presenter: Kim Schvaneveldt and Max Ditlevsen

Synopsis - Applying transportation system level goals and Asset Management principles to the project selection process. Overview of three program funding components - Federal Re-authorization, State Funding Picture, Centennial Highway Program.

19. **Title:** Planning

Presenters: John Quick, John Thomas, Wlat Steinvorth, Matt Swapp, Wayne Jager, Kevin Nichol

Synopsis - Changes in the Planning Organization and its relationship with Regions. Also, the Long-Range Plan (Progress Report). Incorporating CSS into planning (environmental considerations).

20. **Title:** Location Referencing Standards

Presenters: Lloyd Neeley and Alan McEwan

Synopsis - Report of Standards - either adopted or recommended.

21. **Title:** Context Sensitive Solutions and Public Involvement on the 3500 South EIS

Presenters: Angelo Papastamos; UDOT - Region Two
Mike Worrall; Carter-Burgess
Joe Moore, West Valley City
Hal Johnson; UTA
Jon Nepstad, Fehr & Peers

Synopsis - Every project has its context. To understand the context of a project, an appropriate approach to involving the community is necessary. The 3500 South Project Team is using numerous public coordination techniques to understand the issues, needs, and values of the communities. Another exciting element of the public involvement process has been a public school program where school kids are helping the Team with their own version of problem identification and alternative development.

This project is different from the way most UDOT projects have been developed in that it is bringing together a diverse set of agencies as true partners in a complex process and project. The agencies are sponsors for the project, and as such, share responsibilities and risks. The presentation will focus not only on the physical features of the corridor, but on the structure and approach of developing this unique team of partnered agencies.

22. **Title:** Using Travel Models for Visual Traffic Operations and Other Technologies on the 3500 South EIS

Presenters: Dawn Guegan and Jon Nepstad; Fehr & Peers
Mike Worrall, Carter-Burgess

Synopsis - Many of us have now seen computerized simulation of traffic operations. Some of us are also familiar with travel forecast models. Until recently, these were two separate exercises. This presentation will demonstrate how the coordinated use of state-of-the-art software bridging travel models and 3-D traffic operations models can lead to streamlined analyses. The 3500 South Project will be using this state-of-the-art process to help develop the purpose and need, and multi-modal alternatives evaluation.

Other technologies associated with the corridor are a web site designed to both manage the project and foster the public process. This includes web-based Geographic Information System (GIS), document control, meeting scheduling, and public information.

23. **Title:** University Students Bridge Building

Presenters: Kelvin Green and Kristi Horton

Synopsis - The UDOT Engineering Challenge is UDOT's Bridge Building Competition. There are two divisions for the competition. The Spaghetti Bridge Contest is for those students who attend the Engineering Context and they compete by school. Last Year's winner was BYU. The second division is the Toothpick Bridge Competition and is open to UDOT employees. Last year's winner was the Structures Division at the Complex.

24. **Title:** MOT/New MUTCD

Presenter: Glenn Schulte and John Leonard

Synopsis - Over 1,000 people nationwide lost their lives in roadway work zones in 2000. This topic will address the design of safer work zones, appropriate signing and devices, and provide information on the recommendations and regulations of the MUTCD.

25. **Title:** Lessons Learned During the 2002 Olympic Winter Games

Presenters: Andrew Gemperline, Stan Burns and Jim McMinimee

Synopsis - This session will explore the lessons learned regarding its internal operational practices by the lead public transportation agency, the Utah Department of Transportation, during the 2002 Olympic Winter Games in Salt Lake City. In preparation for the largest Olympic Winter Games ever held, the UDOT transformed its organization to facilitate transportation of over 1,600,000 spectators, athletes, and media, while simultaneously supporting the existing road network to facilitate intra- and interstate traffic. There was an additional challenge of dealing with security concerns heightened by the events of September 11, 2001. The UDOT implemented many innovative practices including; establishment of a joint command center at UDOT's TOC, improved field communication, contingency planning, bridge inspection teams, service patrol, traffic observers, pre-Games simulations with partnering agencies and internal groups, and UDOT enhanced existing operational practices such as; expansion of IMT with volunteers from other states, truck and automobile towing services, enhanced installation and use of ITS technologies to operate a highly successful transportation system for the Games. These approaches will be discussed along with the results of a Department initiative to evaluate and assess those operational practices used during the Games, which could be implemented on a longer term basis by the Department, to provide its customers with world class transportation service both on a daily basis and for future large events.

26. **Title:** Electronic Plan Room

Presenter: Darrell Giannonatti, Greg Herrington, & Tom Leholm

Synopsis - UDOT is implementing an electronic plan room. This will allow contractors to access advertisement packages on-line. Come hear about the process and about your role as one who may Design, Prepare and Advertise Projects. What will be required?

27. **Title:** AASHTO Guide—There's nothing "Green" about it.

Presenters: Craig Hancock, Region 3 Design
Travis Jones, John Thomas, Parsons Brinckerhoff

Synopsis - This discussion group will highlight changes to the 1994 AASHTO “Green” book and how they relate to your highway design projects. With significant revisions to items such as K-values for vertical curves, you won’t want to miss this engaging session.

28. **Title:** General Environmental Session

Presenter: UDOT Environmental Services, FHWA, UDOT Region
Environmental Engineers & Archaeologists

Synopsis - This session will cover selected environmental topics that are critical to timely project delivery. Topics will include a description of the actions taken to streamline the environmental process, how to apply for various environmental permits, how to achieve successful wetland mitigation and how to prepare environmental documents for timely approval. The concept of Context Sensitive Solutions (CSS) will be presented. UDOT guidelines for landscaping and wetland mitigation will also be presented.

29. **Title:** Resource Agency Panel Discussion

Presenter: U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service,
Environmental Protection Agency, Division of Wildlife Resources

Synopsis - Resource agency representatives would briefly discuss the resource(s) that they regulate, the latest information on laws that pertain to the resource.

30. **Title:** Environmental Lessons Learned

Presenter: UDOT Environmental Staff, FHWA, Representatives of the Attorney General’s Office, Matt Rifkin

Synopsis - This session would discuss environmental lessons learned on recent projects, litigation potential, risk analysis, administrative record keeping and document preparation. Matt Rifkin, President of InterPlan Co., will present a discussion related to the transportation analysis necessary to gain NEPA clearance. Emphasis on adequate purpose and need statements with lessons learned will be presented. This session should provide some excellent information to the proper handling of the environmental process vis lessons

learned from recent projects.

31. **Title:** Conflict Negotiation: The Art and Science

Presenter: Larry Bonine, President, Pinnacle Leadership Group, Inc.

Synopsis - Discussion will be centered around principals of effective negotiation. Learning to deal with difficult people. How to create win/win situations. Know your "BATNA".

32. **Title:** Leadership Fundamentals

Presenter: Larry Bonine, President, Pinnacle Leadership Group, Inc.

Synopsis - Discussion will focus on those items that are critical to an effective leader. Fundamentals of effective leadership will be presented. Topics will be effective listening, coaching, MBWA, asking effective questions, motivation techniques, and creating synergy.

33. **Title:** CSS Development Training

Presenter: Larry Bonine, President, Pinnacle Leadership Group, Inc.

Synopsis - This session will provide training on interpersonal skill development and building positive relationships with stakeholders. Emphasis will be on communication skills, listening skills, and being open to new ideas.

34. **Title:** Project Managers of Today and Tomorrow (**mandatory for all Project Managers**)

Presenter: Jason Davis, Fred Doehring, Tim Biel, Tim Boschert

Synopsis - Items to be covered will included ePM use and expectations. What are the benefits and who receives them for using ePM correctly. FHWA Stewardship requirements, from concept to construction. Access Management requirements, how they affect your projects and what does UDOT have in place to support your decisions. Design exceptions, the process of how to go about obtaining them and why they may or may not be approved. Anything else that Jason can think of.

35. **Title:** Legacy Parkway--From here to there.

Presenters: Todd Jensen, Byron Parker; UDOT
K.N. Gunalan, Parsons Brinckerhoff

Synopsis - Members of the UDOT Oversight Team as well as the design/builder (PB/FAK) will show how not all is calm on the project front even though the main part of the project is still tied up in the 10th Circuit Court of Appeals. Significant overall design progress as well as construction progress on the Burke Lane/Shepard Lane area has occurred. Find out the latest on this exciting project.

36. **Title:** Provo Canyon—A decade of work

Presenters: Brent Schvaneveldt; UDOT
Randy Lamoreaux, Steve Howe, Thomas Lee and Amy Zaref;
Parsons Brinckerhoff

Synopsis - It seems as if everyone, including UDOT and the consulting world has worked on some aspect of Provo Canyon over the past ten years. The last section within the actual limits of the canyon from Wildwood to Deer Creek State Park is now under final design. The presenters will tie all the previous work together and show how effective public involvement processes, CSS, and innovative geotechnical design are being incorporated into the current design.

37. **Title:** Red Rock Highways—CSS in Southern Utah

Presenters: Mike Miles, Kim Manwill; UDOT
Matt Sibul; Parsons Brinckerhoff
Doug Atkins and Eileen Ringnald

Synopsis - US-191 carries over 15,000 vehicles a day during some summer days in and out of Moab. Not only that, but a tremendous number of bicycles as well. With two current projects to widen and reconstruct this highway in the area, UDOT Region Four has gone the extra mile in implementing CSS tactics. Come and see the process of how these projects have evolved.

38. **Title:** Project Development Business System (PDBS) - Electronic Field Book

Presenters: Michelle Verucchi, Overview of the Project Development Business System

T. Blaine Bailey; Master Database System Demonstration

Synopsis - The management and administration of construction contracts requires collection and analysis of large volumes of information during a project's progression. A state transportation agency's construction management success depends largely on the quality of the information obtained and processed. Accurate and timely information is essential for sound management decisions.

In an effort to improve the efficiency of its construction management system, the UDOT has developed the PDBS System. One of the modules of this system, the Electronic Field Book will be demonstrated during this session. This module downloads contract pay items and stationing information from the Project Accounting and Estimate modules to a handheld device. The handheld device is used to document daily construction work activities at the project site, including pay items and quantities of work performed, labor, equipment, daily time charges, weather and temperature and diary information, including instructions to the contractors. Information collected from the handheld units are uploaded to the Project Accounting module for preparing contractor pay estimates. The handheld units also provide access to the Standard Specifications, Construction MOI, Materials MOI, Inspector Manuals and project specific specifications.

39. **Title:** AGC/UDOT Panel Discussion

Presenters: Darrell Giannonatti, UDOT and Richard Thorn, AGC with a combined panel

Synopsis - This session will be a panel discussion with input and comments from the audience. The target audience is Project Managers and Construction Personnel. Topics and issues of concern to the Contractors and Engineers will be discussed. The discussions will include plans, specifications, construction requirements, traffic control and other related topics.

40. **Title:** Inspectors Manual, using it as a tool

Presenters: Jeff Saddler, Mark Allington, and Steve Nielsen; UDOT

Synopsis - Instruction for the Technicians on what information is in the Inspectors Manual, and how to use its information when preparing for or working on a project.

41. **Title:** Electronic Information, Where to Find It and Why Standards Are Important

Presenters: Barry Axelrod and Farrell Wright; UDOT

Synopsis - Being able to design, manage, or construct a UDOT road or bridge project requires the use of volumes of current information. Outdated or inaccurate information can have significant negative impacts on a project. This session will assist you in finding this important information on the Local Area Network (LAN) Shared Drive and on UDOT's website. Where do you find the latest Standard Specifications, Standard Drawings, Manuals of Instruction, forms, technical information, policies and procedures, Right-of-Way forms, and the Accepted Product Listing. Technology Transfer Newsletters, Research Reports from in-state experimental features, the status of experimental features (test sections) underway, Consultant projects, pools, forms and guidelines, project advertising information, bid letting information, or contract management. There is much more information that is available. Come to the session to find out more.

Critical to the design of a good project is the proper use of Standard Specifications and Drawings and the Standard Summary Sheet. Learn why UDOT has standards and why standards shouldn't be cut and pasted to create a "new" design. The purpose of the Standards Committee is to establish the procedure and place responsibility for the development, revision, and preparation of standard drawings, specifications, and related policies and procedures, and for their review, approval, printing, and distribution. Learn how this is done and how you can help in this process. If a standard doesn't work, learn how to change it. Come prepared to learn and participate.

42. **Title:** E-mail, Acceptable Use

Presenters: Joe Tripp & Cari Eubanks

Synopsis - This workshop will provide insight into current UDOT e-mail management trends, practices, and expenses. Suggestions will be provided for effectively managing the GroupWise Mailbox.

43. **Title:** Civil Rights and Labor

Presenters: Jane Casper

Synopsis - You've heard about 'Prompt Payment', L.E.P., Title VI and Title VII, Site-of-Work, AAP, 'Actual and Virtual Adjacency', BAT, AGC, Apprentice vs. Trainee, CAP, EEO, Fringe Benefits, and more ...? But do you know and understand what they mean and how they apply to your daily duties in the Federal construction field? **We need to talk!** Updated manual will be provided.

44. **Title:** U of U Trax–To Rice-Eccles Stadium and Beyond

Presenter: Jason Davis, Dallas Todd; UDOT
Steve Greene; UTA
Mike Grodner; PB

Synopsis - This session will highlight the recently completed U of U Trax line as well as the ongoing Medical Center Extension project. Coordination of transit installation on state roads, with all the associated conflicts, successes, and lessons learned will be covered. With transit alternatives being discussed for most UDOT reconstruction and capacity increase projects, this session will be valuable to everyone in the transportation field.

45. **Title:** UDOT's Implementation of MicroStation V8

Presenters: Bob Peterson, Darren Bunker (Engineering Technology Systems)

Synopsis - UDOT will implement MicroStation V8 this fall. This session covers the impacts on standards and work flows. ETS will demonstrate the new level structure, dimension and text styles, and the new QC requirements for project data.

46. **Title:** School Zone Safety Program/Safety Programs

Presenter: Sharon Twitchell, Robert Hull, Helena Dulaney-Hamad

Synopsis - A new School Zone Safety Program has been established by Traffic and Safety. This program emphasizes the Department's commitment to go the extra mile to protect children. This session will cover the program goals of school zone safety throughout the State and the direction of the Division to enhance school zone safety education. This session provides an overview of the Safety Programs administered by Traffic and Safety. New procedures for the Safety Spot Improvement Program, Federal Safety any Area Program, Federal Hazard Elimination Program, Work Zone Safety, and School Zone Safety will be discussed.

47. **Title:** Basics of Superpave Mix Design

Presenters: Wellington R. Meier, Jr. Ph.D., P.E., Western Technologies Inc.,
Doyt Bolling, Director Utah T2 Center, and Howard Anderson, UDOT

Synopsis - The Superpave (Superior Performing Asphalt Pavements) mix design procedure, developed during the Strategic Highway Research Project (SHRP), is the first widely accepted and used mix design procedure since development of the Marshall (1930s) and the Hveem (1940s) methods. Superpave uses some of the well-established procedures that were a part of those previous methods, such as volumetric analysis of the mixture, but includes other procedures developed as a part of the SHRP research. The new procedures include; gyratory compaction of test specimens, analysis of combined aggregate gradation, examination of the mixture properties for compaction levels at, above and below the traffic volume based design compaction level, consensus properties for aggregate, and performance graded asphalt. This presentation will examine basic asphalt mix design principles and the manner in which the Superpave mix design procedure addresses them. Recent revisions in the Superpave mix design method since its inception will be discussed.

48. **Title:** CAPH System

Presenters: Doug Anderson; Garyn Perrett, iWorQ; Robert Hull, Traffic and Safety; Lynn Bernhard, Maintenance; Motor Carriers; Region One; Region Two; Region Three; Region Four; Carlos Bracerias

Synopsis - This session is intended to allow experts from each region and division to share their experiences on how they are using the CAPH System to make decisions.

The CAPH initiative is intended to aid UDOT managers in measuring the safety aspects of their programs. Most of these managers are traditionally not involved in direct safety activities, but manage activities that significantly affect the safety of our highways. Many UDOT functions have a profound influence on transportation safety, but we have not consistently and formally measured this influence. Specific performance measures for each UDOT program having an impact on safety are proposed through the CAPH effort. Programs can be improved such as snow removal, deer fence activities, slippery pavement decisions, commercial vehicle inspection, vehicle off-tracking, pavement marking programs, drainage control, glare screen, railroad crossings, construction zone traffic control, and rumble strips, just to name a few.

We have been training region and division personnel on how to acquire crash data over the internet for decision making in programs such as deer fence maintenance, snow & ice removal, pavement skid resistance, drainage

deficiencies, edge drop-off problems, construction zone crashes, passing lane needs, cross wind warning systems, etc.

49. **Title:** Norway DOT, Operations Lessons Learned

Presenters: Stan Burns

Synopsis - This session will present lessons learned from Stan Burns experiences working for the Norwegian Department of Transportation. Stan worked in the Operations office in Oslo Region. The office was responsible for the TOC, maintenance, traffic and safety and environmental. Stan's responsibility was to review the operation and recommend improvements. This presentation will concentrate on what Stan believes Norway does better than the U.S.

50. **Title:** Electronic Program Management System and The New Lessons Learned Database

Presenters: The ePM Team

Synopsis - (New synopsis, updated October 22, 2002) We want to show you the brand-new Electronic Program Management system! Come and see the improvements that will make PDPMS more user friendly and easy to use, including improved payroll entry, streamlined project information screens, and the all-new Lessons Learned Library. It's on the Internet, which means better access 24/7 from wherever! Find out what's in store for the future of project information at UDOT. This session was originally planned as a demonstration of the Lessons Learned System, and you will also see that. Two demonstrations for the price of one!

Original Synopsis follows:

The Lessons Learned system was originally created in Region Two. It was a place to record technical problems, suggestions, and solutions. It provided a shared source for historical information. With the creation of ePM (electronic Program Management), this resource has been placed on the Internet to preserve expert knowledge and to make it available to those who can use it, even after those who shared their knowledge have gone.

The ePM Lessons Learned Database allows users to create records of work-related problems or challenges they have encountered and how these situations were resolved. The solutions and ideas will then be reviewed for possible improvements to policies, procedures or processes in the future. The person who entered the problem is kept informed of its progress.

The database can also be searched for information that might help with a current problem.

51. **Title:** Traffic Studies and Operational Safety Report (OSR)

Presenter: John Leonard, Katie Knaus, and Zeke Gonzales

Synopsis - The Operational Safety Report (OSR) is an essential component to the Project Design Process. This topic will discuss the OSR process that is completed by the Traffic and Safety Division and the importance of the OSR. Changes are being made to the OSR process and these changes will be discussed.

52. **Title:** Traffic Signals Operation and Maintenance

Presenter: Dave Kinnecom, and Mark Parry

Synopsis - During this session, signal programming, operation and maintenance will be covered. Pedestrian timing, phasing, left turn phasing, and the impact of these items on signal operation will be the key elements discussed.

53. **Title:** Innovative Contracting

Presenter: Robert Dyer, Innovative Contracting

Synopsis - Tired of driving through congested construction zones and not seeing much work going on? Do your neighbors wonder if that project will EVER be done? Be the first one on your block to learn how specifications for "Lane Rental" and "A+B Bidding" can help our Contractors get in and get out quickly! Topics include: How to decide if your project would benefit; how these specs help us get Contractors who are the most efficient with time and lane closures; and how these specs reward Contractors based on performance.